Holchem (Service Chemical Co)
CAT000612333

PA Complete 10.2.89.
High priority for SSI
Federal lead.

Beverly - Please make up the six part file, insert this material, and send it to Marcia Brooks for more work.

Thanks

Paul

Not entered 9/25 Pmw

ecology and environment, inc.
160 SPEAR STREET, SAN FRANCISCO, CALIFORNIA 94105, TEL. 415/777-2811
International Specialists in the Environment

PRELIMINARY ASSESSMENT

TO: Paul La Courreye, Site Screening Coordinator, EPA Region IX

THROUGH: Jim James, Ecology and Environment, Inc.

PREPARED BY: Sue Swan, Ecology and Environment, Inc.

DATE: May 11, 1989

SITE: Holchem dba Service Chemical Company
1341 East Maywood Avenue
Santa Ana, California 92705
Orange County

TDD: F9-8902-021

EPA ID#: CAT000612333

PAN: FCA1191RAA

cc: FIT Master File
Chris Lichens, Ecology and Environment, Inc.
Karen Schwinn, EPA Region IX

1. INTRODUCTION

As part of the United States Environmental Protection Agency's (EPA) Environmental Priorities Initiative (EPI) program, EPA has requested Ecology and Environment, Inc.'s Field Investigation Team to conduct a Preliminary Assessment of Holchem dba Service Chemical Company at 1341 Maywood Avenue, in the City of Santa Ana, Orange County, California.

The EPI program integrates the Resource Conversation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in order to set priorities for clean up of the most environmentally significant sites first. The Preliminary Assessment (PA) uses CERCLA Hazard Ranking System (HRS) criteria to determine the site's eligibility for the National Priorities List (NPL), and thus is used to prioritize facilities for the RCRA program.

2. SITE DESCRIPTION

Holchem "doing business as" Service Chemical Company (Holchem), began operations as a recycler of perchloroethylene and 1,1,1-trichloroethylene, and as a chemical distribution facility in 1961. Prior to that time, the site was used for agricultural purposes. Holchem is located at 1341 Maywood Avenue in the City of Santa Ana, Orange County, California (see Figure 1, Site Location Map: T5S, R9W, Section 19, and Figure 2, Facility Map). Mr. Thomas Lendzion was the original owner of Service Chemical Company. Mr. Lendzion sold the company to Holchem, Inc. in 1985, although Mr. Lendzion still retains the title to the land and the buildings in which Holchem resides. The facility is one-half acre in size, and is located in an area zoned for light industrial use (1,2).

3. APPARENT PROBLEM

In 1985 Mr. Lendzion hired J.T. Alton, Inc. (Alton) to investigate the possibility of contamination below the site. Alton took soil and water samples that showed the presence of subsurface contamination which consisted mainly of chlorinated hydrocarbons, acetone, and methyl ethyl ketone (MEK). Alton felt no further investigation was necessary (1).

In 1987, as a prerequisite for a state RCRA permit, Holchem hired Versar, Inc. (Versar) to conduct a site characterization and investigation of Holchem. Versar drilled three monitoring wells, which confirmed the presence of chlorinated hydrocarbons, toluene, acetone and MEK. These chemicals were found in the perched water zone encountered directly beneath the site. This perched water zone extends down to approximately fifteen feet, where a zone of "highly plastic clay" is encountered. Holchem Inc.'s current consultant, Harding-Lawson Associates, and the Santa Ana Regional Water Quality Control Board (RWQCB), the State of California's lead agency, are currently determining if the contamination has migrated below this clay layer (1,3).

Holchem receives all waste they collect in 55-gallon drums. Clients of Holchem send the facility spent waste mixtures of oil, water, perchloroethylene and/or 1,1,1-trichloroethylene. Drums are tested upon arrival for content. Those drums which contain greater than forty percent solvent are moved to Containment Area #3 (see Figure 3) until space becomes available inside the building where distillation occurs. Drums which contain less than forty percent solvents are solidified in bulk with kiln dust and stored on the north end of the facility prior to transport to a Class I disposal facility (4).

As a service to their clients, Holchem also occasionally accepts 55-gallon drums of waste alcohols, MEK, thinners, and fluorinated solvents. These wastes, which the City Santa Ana Fire Department restricts to less than ten drums stored at any one time, are solidified with sawdust and temporarily stored on the north side of the facility, prior to acceptance at a Class I facility (4).

SOURCE : Versar, Inc.

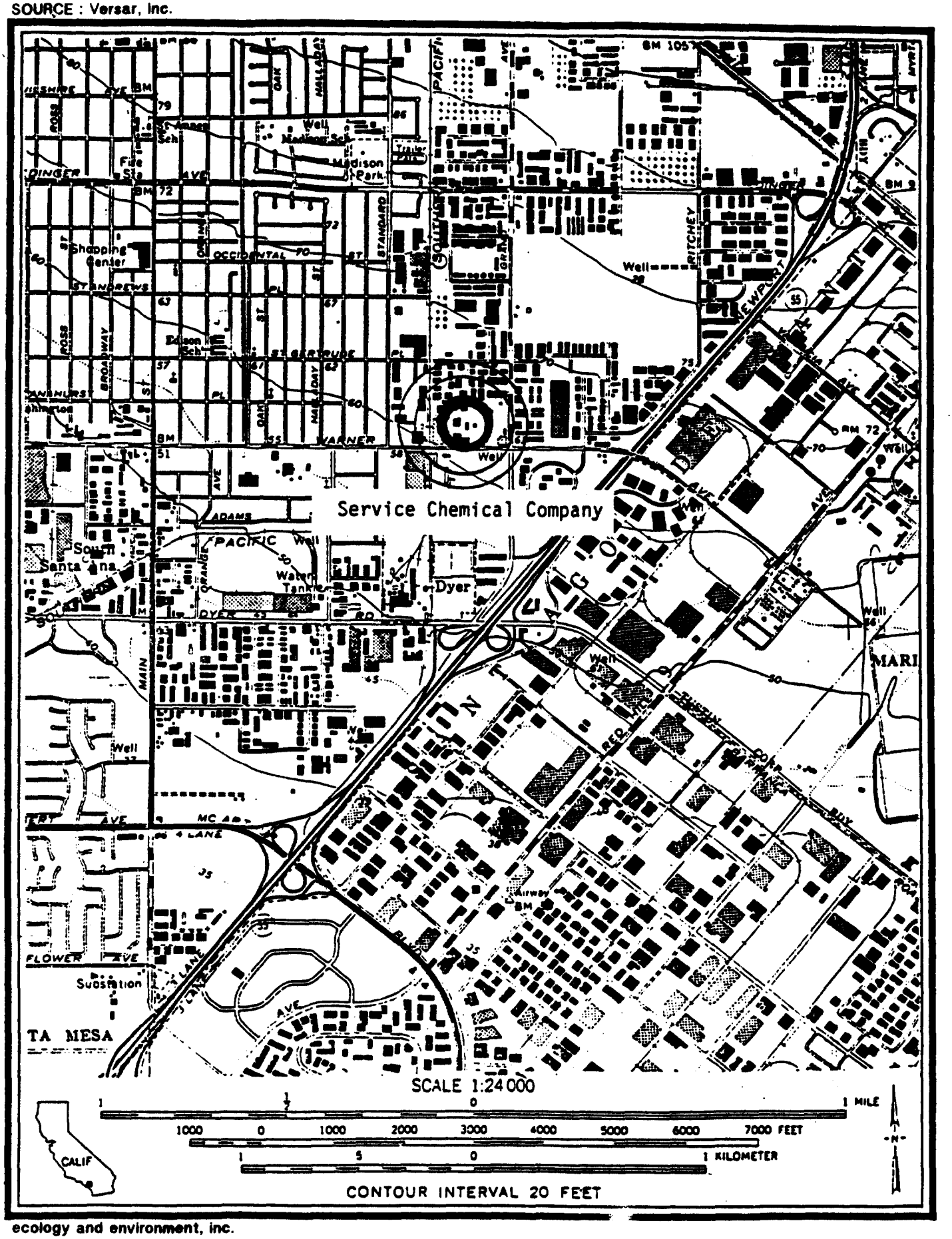

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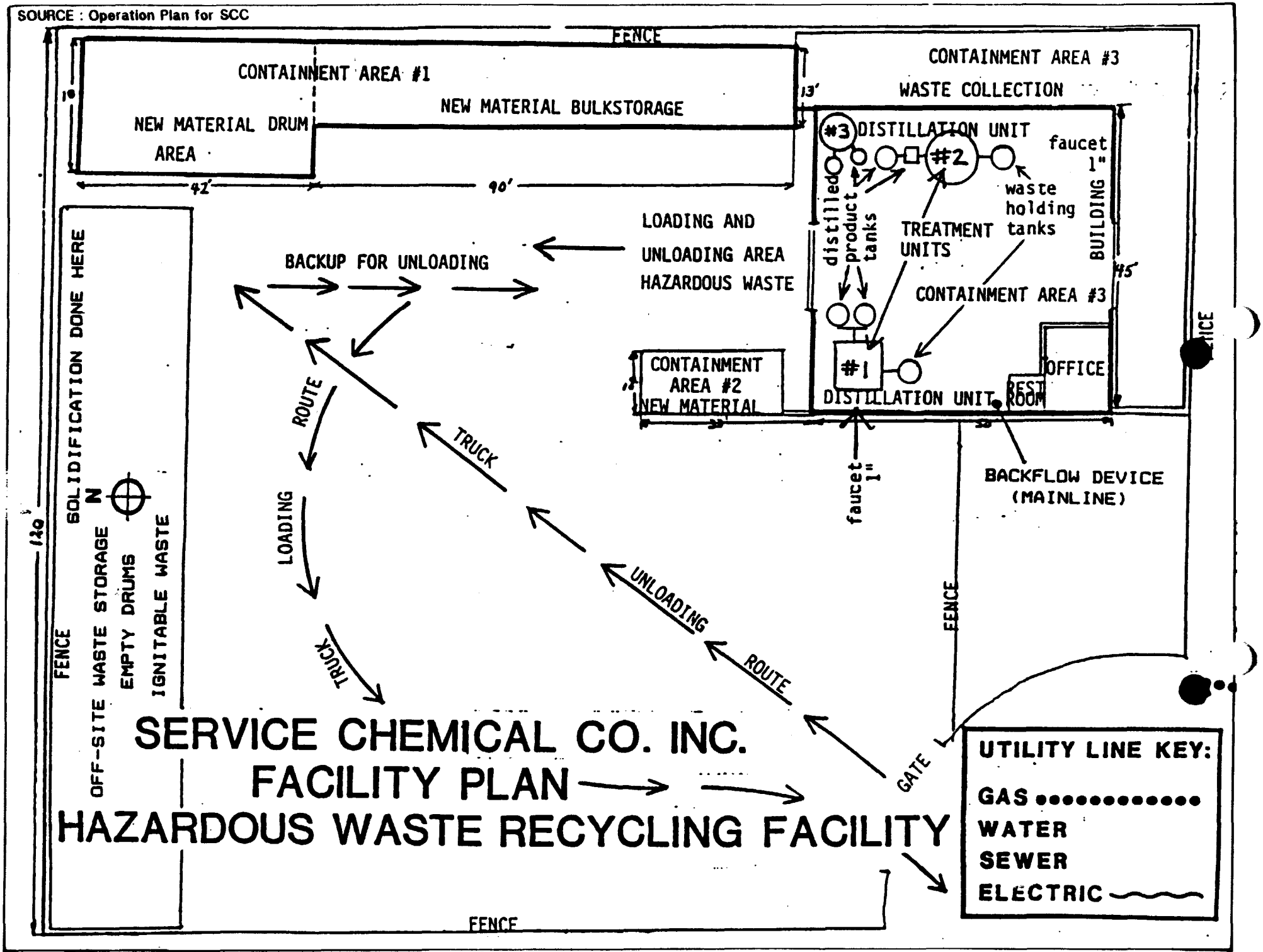
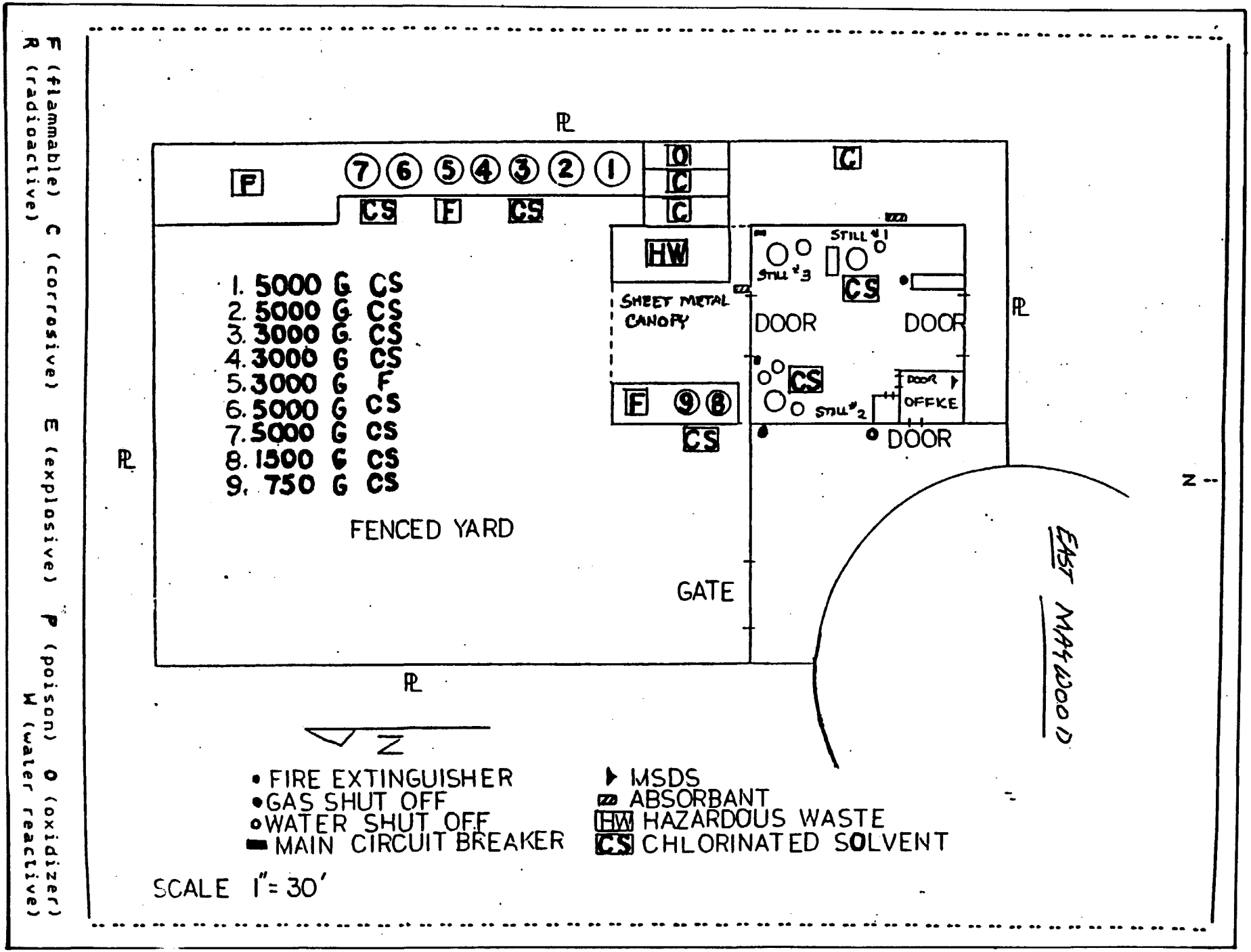
Figure 1 SITE LOCATION MAP
HOLCHAM DBA SERVICE CHEMICAL COMPANY
1341 MAYWOOD AVENUE
SANTA ANA, CA 92707



ecology and environment, inc.

Figure 2 FACILITY MAP
HOLCHAM DBA SERVICE CHEMICAL CO.

SOURCE : From EPA CERCLIS File



ecology and environment, inc.

Figure 3 CHEMICAL STORAGE AND CAPACITY
HOLCHAM A SERVICE CHEMICAL CO.

The EPA sent Holchem a RCRA Section 3007 request for information on potential releases from their Solid Waste Management Units. In response, Holchem indicated that the "previous operator" (Mr. Lendzion) may have allowed wastes, such as "chlorinated solvents, ketones, aliphatics, alcohols, and aromatics" to leak onto the ground from deteriorating drums. These drums sat directly on the ground surface with no secondary containment. This potential release may have continually occurred from 1961 until the 1970's when the area was covered with asphalt. This is the same area where the flammable wastes are now stored, on the north end of the facility. This documentation establishes a link between the hazardous substances used at Holchem and the same substances found in the perched aquifer (5).

4. HRS FACTORS

4.1 Observed Release

Contaminants have been released to the upper perched aquifer. Versar sent water samples from the on-site monitoring wells to Chemwest Laboratories, Inc., a member of the Environmental Protection Agency's Contract Laboratory Program, for organic and inorganic compound analysis. Sixteen organic compounds were found in the water samples. Amoung the highest levels were: trichloroethene, 193,000 ppb; methylene chloride, 152,000 ppb; 1,1,1-trichloroethane, 122,000 ppb; 2-butanone, 97,600 ppb; and tetrachloroethylene, 32,300 ppb. A clay layer exists between the upper perched aquifer and the lower semi-perched aquifer. However, this clay layer may not be continuous and contamination below the clay layer is suspected. The vertical and the lateral extent of contamination is currently being investigated by Holchem and the RWQCB (1,3).

The boundary between these two upper aquifers and the lower Pleistocene aquifer, which supplies water for domestic, industrial and agricultural purposes, is very poorly defined due to the heterogeneity of the aquifer sediments lying below the site. Drilling well logs of municipal wells within one mile of Holchem show a thick clay layer (80-100 feet) lying directly below Holchem. This clay layer may prevent contaminant migration down to the drinking water aquifer, but the horizontal extent of this clay layer cannot be reasonably predicted without localized hydrologic tests. Therefore, the potential for an observed release to the drinking water aquifer cannot be determined with the information available (1,12).

No surface water bodies within three miles of Holchem are used for drinking water purposes. There is no observed release to surface water (6).

There is no documentation for an observed release to air and low potential for a documented release since all contamination is below the ground surface and the site has since been paved (1).

4.2 Direct Contact/Fire and Explosion

FIT conducted a site drive-by on March 17, 1989. Holchem is completely surrounded by industry. On the eastern border is a large plant which produces asphalt. Smaller industries are on the other three borders. Plot plans show a cyclone fence surrounding the facility; this could not be confirmed on the east side. What appeared to be a pile of junk was located in the northeast corner. The fence on the west side is beginning to fall down, although no open breaks were observed. The facility is not open to the public and all gates are closed and locked at night (7).

Holchem is inspected and permitted through the City of Santa Ana Fire Department for all flammable and hazardous materials stored on-site. There was no documentation showing that Holchem presents a fire or explosion hazard (8).

4.3 Waste Type/Quantity

Holchem stores chemicals and also recycles 1,1,1-trichloroethane (TCA) and perchloroethylene (PCE) (see Table I). The recycling facilities consist of three distillation units, located in a building at the southeast corner of the site (see Table II). Holchem receives spent waste mixtures of TCA and PCE, other solvents, oil and water. After distillation, the recycled TCA and PCE are pumped out and the sludge is removed from the bottom of the still. This sludge is picked up by Romic Chemical (CAD009452657) for further treatment. These still bottom wastes total 5,000 lbs. annually, after solidification with kiln dust (4,9).

Other solvents (e.g. trichlorotrifluoroethane, isopropyl alcohol) are temporarily stored on-site, then transported to Omega Chemical (CAD042245001) for further treatment (9,000 gallons annually) (9).

As a courtesy to their customers, Holchem picks up flammable wastes, and, after solidification with sawdust, sends them to Glueral Portland (Systech KSD980633259) for energy recovery. The estimated annual volume of wastes transported was not available (4,9).

Holchem has several above-ground tanks used to store hazardous wastes and materials. For information on the capacities and categories of chemicals these tanks contain, see Figure 3 (9).

Holchem has five containment areas within the facility (see Figure 2). They are (4):

- o Containment Area #1 - stores shipments of virgin hazardous materials, contained by a six-inch berm;
- o Containment Area #2 - stores newly recycled waste, surrounded by six-inch berm;
- o Containment Area #3 - stores wastes awaiting recycling,

TABLE I

HAZARDOUS SUBSTANCES STORED/RECYCLED AT HOLCHEM

NAME OF SUBSTANCE	TYPE STORAGE	MAXIMUM AMOUNT AT ONE TIME (IN GALLONS)	TOTAL AMOUNT IN ONE YEAR (IN GALLONS)	DESCRIPTION OF USE
Acetone	drums	330	3,300	resold
Ethanol 200 Proff Anhydrol	drums	495	5,940	resold
Phosphoric Acid	drums	825	23,925	resold
1,1,1,- Trichloroethane	drums	1,650	16,500	resold
1,1,1 - Trichloroethane	bulk	6,000	210,000	resold
Hydrochloric Acid	drums	440	7,920	resold
Isopropanol Alcohol-IPA	drums	440	4,400	resold
Perchloroethylene	drums	550	19,800	resold
Perchloroethylene	bulk	4,000	144,000	resold
Lacquer Thinner	drums	1,650	36,300	resold
Methyl Alcohol	drums	440	8,800	resold
Methyl Ethyl Kethone	drums	550	16,500	resold
Methyl Isobutyl Ketone	drums	550	17,050	resold
Methylene Chloride	drums	275	10,175	resold
Methylene Chloride	bulk	1,500	30,000	resold
Nitric Acid	drums	330	6,600	resold
Nitromethane	drums	110	1,100	resold

TABLE I (Cont.)

NAME OF SUBSTANCE	TYPE STORAGE	MAXIMUM AMOUNT AT ONE TIME (IN GALLONS)	TOTAL AMOUNT IN ONE YEAR (IN GALLONS)	DESCRIPTION OF USE
Toluene	drums	330	4,290	resold
Xylene	drums	550	8,250	resold
Sulfuric Acid	drums	440	10,560	resold
Waste Acids	drums	1,100	-	transfer to disposal facility
Waste Flammables	drums	2,200	-	transfer to disposal facility
Waste 1,1,1 - Trichloroethane	drums	3,300	-	Recycled in-house and resold
Waste Perchloroethylene	drums	2,200	-	Recycled in-house and resold
Waste Methylene Chloride	drums	330	-	Transferred to disposal and recycling facility

TABLE II

DISTILLATION UNITS USED AT HOLCHEM

UNIT #	MATERIAL PRODUCED	AMOUNT PRODUCED PER DAY (IN GALLONS)	ONCE-THROUGH VOLUMNE (IN GALLONS)	CONSTRUCTION	DATE OF CONSTRUCTION
1	perchloroethylene	500	120	1/8" thick steel shell, with stainless steel lining, supported off the floor by 4" legs	1966
2	1,1,1 - trichloroethylene	1,500	360	same as above	1966
3	perchloroethylene and/or 1,1,1 - trichloroethylene	2,500	500	same as above	1969

surrounded by six-inch berm;

- o Empty drum and flammable storage area - this area also has a six-inch berm surrounding it;
- o Building with distillation units - a six-inch berm surrounds the building.

4.4 Groundwater

There are at least nineteen active private and municipal wells within three miles of Holchem. All municipal wells are perforated below 300 feet. Private wells within three miles are used for irrigation of parks and cemeteries; the depths of perforations for these wells are not known. The closest active well is located at 1730 Santa Fe Street, approximately 2200 feet northeast of the site. This well, along with five other active wells are owned by the City of Santa Ana. These wells are connected to a grid system which combines all well water extracted by the City of Santa Ana with imported water purchased from the Metropolitan Water District. This grid system supplies over 75,000 people with domestic water supplies (10,11,12).

The perched aquifer was initially found at seven feet below the surface. Sediments in the perched aquifer are mostly silty sands. This is not a usable aquifer. The clay layer which underlies this upper aquifer begins at twelve to fifteen feet. Below this confining clay layer is a shallow semi-perched aquifer, beginning at twenty to twenty-five feet (1).

Groundwater in the semi-perched aquifer flows southeast. Water quality varies widely, since saltwater intrusion deteriorates the water quality near the ocean, and past disposal of oilfield wastes, agricultural activities, and industrial operations have impacted water quality throughout the basin. Two limited areas, the Talbert and Gaspur zones, produce potable water, but both of these zones are outside the three mile radius of the site (1, 11).

Below the semi-perched aquifer lies the Pleistocene aquifer, the local drinking water aquifer. All of the municipal wells within three miles of Holchem are perforated at 300 feet or lower. Over the whole basin, the Pleistocene aquifer lies between fifty and 300 feet below the surface. This wide disparity in aquifer depth is a result of the heterogeneity of the sediments below the northern fault block of the Tustin Plain, which underlies the Holchem facility (1,12).

Determining if an interconnection exists within three miles of Holchem between the semi-perched and the Pleistocene aquifers is very difficult, without localized hydrologic tests. A thick clay layer (80-100 feet), which lies directly below Holchem, could prevent the downward migration of contaminants, but the lateral extent of this clay layer is not known (12,13).

The unsaturated zone above the perched aquifer is composed mostly of

clayey silts (1).

Net precipitation for the area is 3.39 inches/year (14).

If local hydrologic tests could determine that the thick clay layer below the site does not extend for a three mile radius, and contamination from the perched aquifer has reached the semi-perched aquifer, there may be potential for an observed release.

4.5 Surface Water

No surface water bodies within three miles of Holchem have any domestic, industrial, or agricultural uses.

4.6 Air

There have been no documented releases to the air at Holchem.

4.7 Other HRS Factors

The area surrounding Holchem is zoned for light industrial use. Most of the area within three miles is generally industrial in nature, although a large resident population is approximately one-half mile northwest of the site (7).

Due to the industrial nature of the area surrounding Holchem, the chances of an endangered species existing within one mile of the facility are remote. No wetlands exists within two miles of the site (2,7).

5. PROPOSED REVISED HRS CONSIDERATIONS

There is no potential for the site to impact sensitive environments. There is no direct on-site exposure, no surface water targets exist (i.e. no potential contamination if the food chain), and there is no potential for air release since all contamination lies below the ground surface and the site has since been paved.

6. OTHER REGULATORY INVOLVEMENT

The RCRA database shows Holchem as a treatment/storage/disposal facility and a transporter. The facility has a status of "1" (active facility which has submitted a Part A application) (16).

The RWQCB is the lead agency for the State of California and oversees the investigation of the vertical and lateral extent of subsurface contamination. Off-site wells have been proposed and approved. On-site wells are currently being resampled (3).

Holchem currently operates under an Interim Status Document issued by

the California Department of Health Services (DOHS) in 1981. This document allows Holchem to recycle and store wastes for up to ninety days. Holchem submitted Part A of their application in 1980. Part B, the Operation Plan, was originally submitted in 1983. It underwent revision in 1986, and was again submitted in 1988. An inspection conducted by DOHS on February 16, 1989, prior to final permitting, discovered major violations, which stopped the permitting process. Holchem has informed the DOHS of their intention to replace the distillation units currently in use, relocate the flammable waste storage, and repair breaks in the berms surrounding the containment areas. An entirely new Operation Plan is being written and should be in to the DOHS early in May 1989 (17).

The City of Santa Ana Fire Department permits and regularly inspects Holchem. Any records of past or present violations were not available due to a pending lawsuit (8).

The Orange County Health Care Agency permits Holchem for its above-ground tanks (Permit #4420) and inspects the facility yearly. Minor violations for inadequate labeling have been cited, but there were no major violations noted (9).

Holchem holds several permits from the South Coast Air Quality Management District for air emissions of various substances from on-site maintenance equipment. Holchem has several violations for exceeding these permitted levels, but no serious violations have been cited (17).

7. REMOVAL CONSIDERATIONS

No emergency remediation was needed at this site.

8. CONCLUSIONS

Holchem, located at 1341 Maywood Avenue, Santa Ana, California, has operated as a hazardous waste recycling and chemical distribution facility since 1961. Contamination from chlorinated solvents has been found in the perched aquifer below the facility from chemicals which have been used on-site. The Regional Water Quality Control Board is supervising an investigation to determine whether these contaminants have migrated to the semi-perched aquifer. Without localized hydrologic tests, it is difficult to determine if the thick clay layer which lies directly below the site extends for a three mile radius. Therefore, the potential for an observed release to groundwater cannot be determined.

Holchem is not likely to qualify for inclusion on the National Priorities List (NPL) due to the presence of a thick clay layer (80-100 feet) which separates the site from the drinking water aquifer, the depth to the drinking water aquifer (>300 feet), insufficient waste quantity, and lack of surface water or air targets.

9. RECOMMENDATIONS

It appears that Holchem (dba Service Chemical Company), in Santa Ana, California, is not eligible for inclusion on the National Priorities List due to the following factors:

- o presence of a thick clay layer (80-100 feet) below the site;
- o depth to aquifer of concern (>300 feet);
- o insufficient waste quantity; and,
- o no surface water or air targets.

FIT recommends a high priority RCRA Facility Assessment (RFA) be conducted at Holchem due to the following factors:

- o recent (1989) RCRA violations for breaks in containment structures for hazardous wastes;
- o past violations for storing wastes over permitted time limits; and
- o sloppy handling practices which lead to the contamination already present in the uppermost groundwater aquifer.

EPA CONCURRENCE

	Initial	Date
Low Priority RFA	_____	_____
Medium Priority RFA	_____	_____
High Priority RFA	KS	8/28/89

REFERENCES

1. Versar, Inc., "Soil and Groundwater Contamination Investigation of the Holchem, Inc., Service Chemical Company Site.", January 19, 1988.

2. United States Geological Survey, Tustin, California Quadrangle, 1965 (photorevised 1981).

3. Swan, Sue, Ecology & Environment, Inc. and Tom Peltier, geologist, California RWQCB, contact report, April 4, 1989.

4. ECOS Management Criteria, Inc., "Operation Plan for Hazardous Waste Treatment and Recycling Facility" Holchem dba Service Chemical Co., Santa Ana, California, January 1986.

5. Holchem dba Service Chemical Company to Environmental Protection Agency's Resource Conservation and Recovery Act division, response to Section 3007 request for information.

6. Swan, Sue, Ecology & Environment, Inc. and Dick Runge, Orange County Flood Control District, contact report, February 15, 1989.

7. Swan, Sue, Ecology & Environment, Inc., field note's from FIT Site Drive-by at Service Chemical Co., March 17, 1989.

8. Swan, Sue, Ecology & Environment, Inc., and Captain Bob Runnells, inspector, City of Santa Ana Fire Department, contact report, March 17, 1989 and Hazardous Materials Disclosure Form, December 28, 1988.

9. Orange County Health Care Agency Inspection Reports, 1985-7

10. Swan, Sue, Ecology & Environment, Inc., and Nancy Bailey, water quality specialist, City of Santa Ana, February 14, 1989.

11. Swan, Sue, Ecology & Environment, Inc., and Stacy Drinkwine, Orange County Water District, contact report, March 16, 1989.

12. Swan, Sue, Ecology & Environment, Inc., and Tony Ruppaner, water production supervisor, City of Santa Ana Public Works, contact report, March 28, 1989.

13. Swan, Sue, Ecology & Environments, Inc, and Tony Ruppaner, water production supervisor, City of Santa Ana Public Works, copy of driller's log for well #26, March 28, 1989.

14. MITRE Corporation, "Net Precipitation Values for draft revised HRS", May 1988.

15. EPA RCRA Data Base listing of March 8, 1988.

16. Swan, Sue, Ecology & Environment, Inc. and Tayseer Mahmud, waste management engineer, Department of Health Services, contact report, April 11, 1989.

17. South Coast Air Quality Management District permits and Notices of Violations.

CONTACT REPORT

AGENCY/AFFILIATION: City of Santa Ana		
DEPARTMENT: Dept. of Public Works		
ADDRESS/CITY: 723 Walnut, Santa Ana		
COUNTY/STATE/ZIP: Orange County, CA		
CONTACT(S)	**TITLE**	**PHONE**
1. Tony Ruppaner	Water Production Supervisor	714-657-6599
2.		
E & E PERSON MAKING CONTACT: Sue Swan		**DATE:** 03/28/89
SUBJECT: water wells, driller's logs		
SITE NAME: OCCC/SCC	**EPA ID#:**	

Mr. Ruppaner allowed me to view and copy a driller's log. We discussed the general hydrogeology of the Santa Ana area. All production wells are screened below 300 feet in the Santa Ana, Tustin and Costa Mesa area. He knows of a couple of private wells screened above 300 feet, but they are only used for irrigation; no water above 300 feet is considered potable due to area-wide contamination. Mr. Ruppaner feels the stratigraphy of the sediments above 300 feet is extremely variable and can vary widely over a relatively small area (a few square miles). He believes prediction of the sediments over a three mile radius would be impossible without localized testing.

An examination of driller's logs for municipal wells within three miles showed the clay layer present in the well log I copied was also present in these other wells.

Reference # 12

CONTACT REPORT

AGENCY/AFFILIATION: City of Santa Ana		
DEPARTMENT: Water & Sewer Utilities Dept.		
ADDRESS/CITY: 217 N. Main, Santa Ana		
COUNTY/STATE/ZIP: Orange County, CA 92701		
CONTACT(S)	**TITLE**	**PHONE**
1. Nancy Bailey	Water Quality Specialist	714-565-4040
2.		
E & E PERSON MAKING CONTACT: Sue Swan		**DATE:** 02/14/89
SUBJECT: sources of water use in Santa Ana		
SITE NAME: OCCC/SCC	**EPA ID#:**	

Ms. Bailey told me Santa Ana has 17 active wells in their well system. The Groundwater from these wells is combined with water from MWD to provide residents of Santa Ana with domestic water supplies. No contamination has been detected by her office in any of the wells Santa Ana owns. The city has over 20,000 connections currently in use. Ms. Bailey sent me a map with active wells on it, and the latest round of testing. (see attached)

The Orange County Water District regulary tests the City of Santa Ana Municipal wells for the presence of Volatile organic compounds. No contamination from any organic compounds has been detected.

Reference # 10

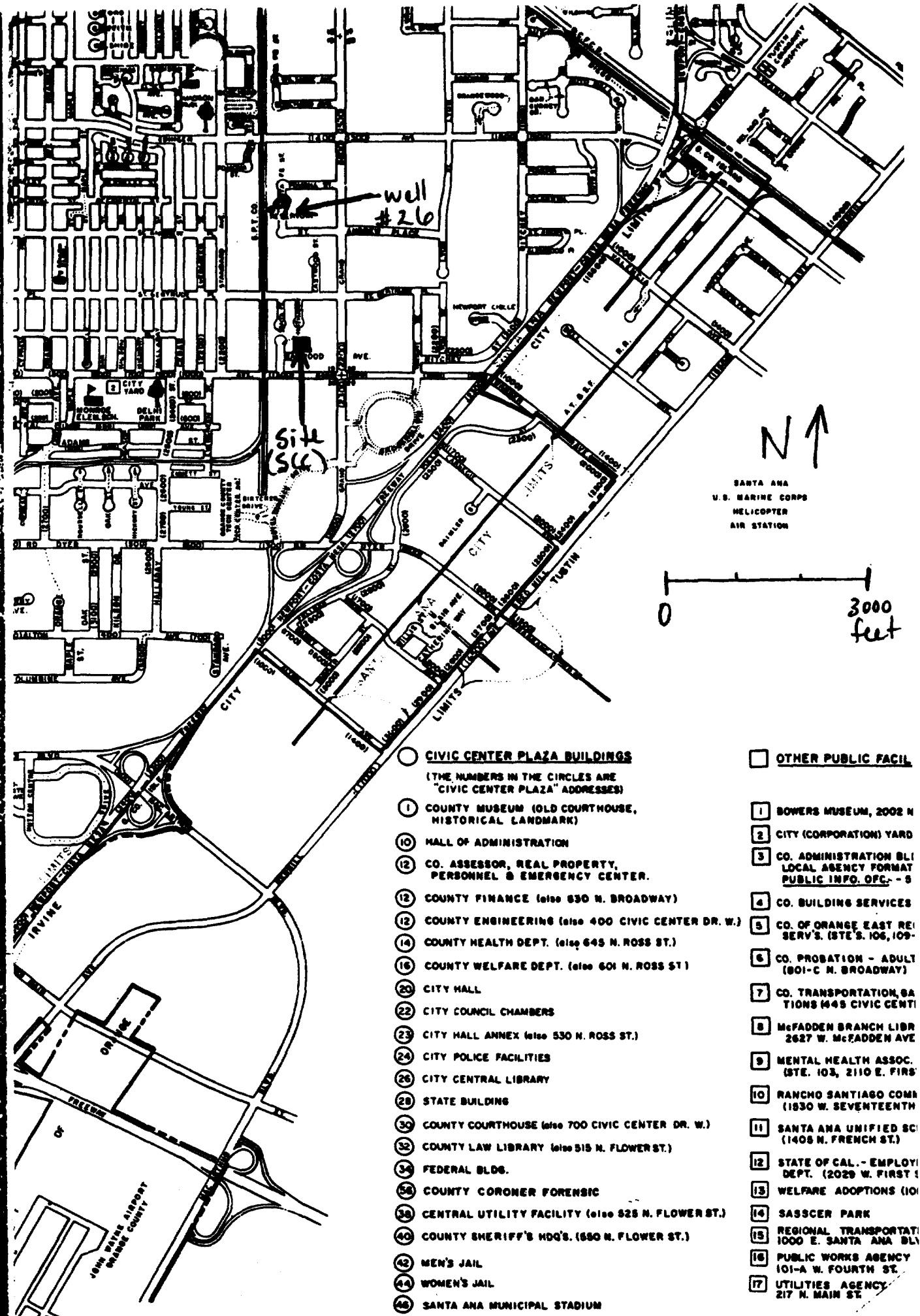
CONTACT REPORT

AGENCY/AFFILIATION: City of Santa Ana		
DEPARTMENT: Dept. of Public Works		
ADDRESS/CITY: 723 Walnut St., Santa Ana		
COUNTY/STATE/ZIP: Orange County, CA		
CONTACT(S)	**TITLE**	**PHONE**
1. Tony Ruppaner	Water Production Supervisor	(714) 657-6599
2.		
E & E PERSON MAKING CONTACT: Sue Swan		**DATE:** 03/28/89
SUBJECT: driller's log for Santa Ana well #26		
SITE NAME: OCCC/SCC		**EPA ID#:**

Driller's log for 1730 S. Santa Fe St. (Santa Ana well #26)

0-12	top soil	578-610	clay & gravel	1150-1160	clay
12-35	brown clay	560-578	clay & gravel	1160-1186	clay & gravel
35-60	brown clay	578-610	clay & gravel		
60-65	gravel	610-633	clay & gravel		
65-104	sandy clay	633-640	clay	TD = 1186	
104-130	brown clay	695-710	clay & gravel		
130-150	gravel	710-730	clay		
150-169	clay	730-750	gravel	perfs:	330-360
169-250	clay	750-810	clay		700-756
250-255	gravel & clay	810-880	clay & gravel		790-860
255-262	gravel	880-890	clay		890-940
262-270	clay & gravel	890-898	clay & gravel		970-1010
270-350	brown clay	898-930	clay		1110-1140
350-370	clay & gravel	930-939	gravel		
370-417	clay & sand	939-950	gravel		
417-435	clay & sand	950-980	clay		
435-442	gravel	980-990	clay & gravel		
442-453	clay	990-1000	gravel(shells)		
453-490	clay & gravel	1000-1030	clay & gravel		
490-510	clay	1030-1040	clay & gravel		
510-545	clay & gravel	1040-1075	clay		
545-555	clay & gravel (w/shells)	1075-1077	clay & gravel		
		1077-1085	clay		
555-560	gravel	1085-1120	gravel		
560-578	clay & gravel	1120-1150	clay & gravel		

Reference # 13



CIVIC CENTER PLAZA BUILDINGS

(THE NUMBERS IN THE CIRCLES ARE "CIVIC CENTER PLAZA" ADDRESSES)

1. COUNTY MUSEUM (OLD COURTHOUSE, HISTORICAL LANDMARK)
10. HALL OF ADMINISTRATION
12. CO. ASSESSOR, REAL PROPERTY, PERSONNEL & EMERGENCY CENTER.
12. COUNTY FINANCE (also 630 N. BROADWAY)
12. COUNTY ENGINEERING (also 400 CIVIC CENTER DR. W.)
14. COUNTY HEALTH DEPT. (also 645 N. ROSS ST.)
16. COUNTY WELFARE DEPT. (also 601 N. ROSS ST.)
20. CITY HALL
22. CITY COUNCIL CHAMBERS
23. CITY HALL ANNEX (also 530 N. ROSS ST.)
24. CITY POLICE FACILITIES
26. CITY CENTRAL LIBRARY
28. STATE BUILDING
30. COUNTY COURTHOUSE (also 700 CIVIC CENTER DR. W.)
32. COUNTY LAW LIBRARY (also 515 N. FLOWER ST.)
34. FEDERAL BLDG.
36. COUNTY CORONER FORENSIC
38. CENTRAL UTILITY FACILITY (also 525 N. FLOWER ST.)
40. COUNTY SHERIFF'S HDQ'S. (550 N. FLOWER ST.)
42. MEN'S JAIL
44. WOMEN'S JAIL
46. SANTA ANA MUNICIPAL STADIUM

OTHER PUBLIC FACIL

1. BOWERS MUSEUM, 2002 N
2. CITY (CORPORATION) YARD
3. CO. ADMINISTRATION BLI LOCAL AGENCY FORMAT PUBLIC INFO. OFC. - S
4. CO. BUILDING SERVICES
5. CO. OF ORANGE EAST RE SERV'S. (STE'S. 106, 109-
6. CO. PROBATION - ADULT (801-C N. BROADWAY)
7. CO. TRANSPORTATION, SA TIONS (445 CIVIC CENTI
8. McFADDEN BRANCH LIBR 2627 W. McFADDEN AVE
9. MENTAL HEALTH ASSOC. (STE. 103, 2110 E. FIRS
10. RANCHO SANTIAGO COM (1530 W. SEVENTEENTH
11. SANTA ANA UNIFIED SC (1406 N. FRENCH ST.)
12. STATE OF CAL. - EMPLOY DEPT. (2029 W. FIRST
13. WELFARE ADOPTIONS (10
14. SASSCER PARK
15. REGIONAL TRANSPORTAT 1000 E. SANTA ANA BL
16. PUBLIC WORKS AGENCY 101-A W. FOURTH ST.
17. UTILITIES AGENCY 217 N. MAIN ST.

10 | 11 | 12 | 13

JANUARY 1989

CITY OF SANTA ANA

PUBLIC WORKS AGENCY

GENERAL MINERAL WATER ANALYSES

			1	2	3	4	5	6	7	8	(9) Well #26	10	11	12
			WELL 13 723 W. Walnut Street	WELL 14 2415 N. Bristol Street	WELL 16 602 N. Flower Street	WELL 18 2415 N. Bristol Street	WELL 20 W. First St./Mountain View St.	WELL 21 W. First St./Mountain View St.	WELL 22 2736 Cambridge Avenue	WELL 24 1800 W. Twenty-second Street	WELL 26 1730 S. Santa Fe Street	WELL 27 720 E. Memory Lane	WELL 28 720 E. Memory Lane	WELL 29
BICARBONATE	HCO3	mg/l	241.30	208.20	240.20	218.30	193.10	191.40	157.70	194.20	191.40	169.50	183.50	181
CALCIUM	Ca	mg/l	124.10	97.90	113.10	114.60	51.40	52.50	28.00	58.50	52.90	51.10	79.80	49
CARBONATE	CO3	mg/l	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1
CHLORIDE	Cl	mg/l	72.50	62.50	81.00	80.40	15.50	14.60	15.20	23.10	20.60	29.20	51.70	19
FLOURIDE	F	mg/l	0.30	0.40	0.40	0.40	0.50	0.40	0.20	0.40	0.20	0.30	0.30	0
IRON	Fe	mg/l	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0
MAGNESIUM	Mg	mg/l	14.50	11.30	17.60	14.10	10.90	9.10	6.20	10.40	8.90	10.40	12.90	9
MANGANESE	Mn	mg/l	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0
NITRATE	NO3	mg/l	43.50	24.50	40.20	35.90	2.30	3.40	3.20	4.50	3.70	5.90	12.80	4
POTASSIUM	K	mg/l	3.60	3.20	3.30	3.10	2.90	2.60	3.30	3.20	3.30	3.40	3.20	3
SILICA	SiO2	mg/l	2.50	2.40	1.90	2.80	2.40	2.70	2.30	2.50	2.50	2.60	2.00	2
SODIUM	Na	mg/l	51.20	45.60	48.60	51.20	26.20	33.20	56.20	25.20	45.20	38.20	41.20	35
SULFATE	SO4	mg/l	133.50	111.50	116.00	122.20	47.20	52.80	62.20	49.40	88.00	74.00	105.20	65
TOTAL ALKALINITY	CaCO3	mg/l	197.80	170.70	196.90	178.90	158.20	156.90	129.30	159.20	156.90	138.90	150.40	149
TOTAL DISSOLVED SOLIDS		mg/l	560.50	477.40	564.00	536.90	277.30	298.90	279.00	316.20	324.50	307.40	413.00	305
TOTAL HARDNESS	CaCO3	mg/l	369.60	290.80	354.80	344.80	173.20	168.80	95.60	188.80	174.00	170.40	252.40	163
H+ CONCENTRATION	PH	mg/l	7.92	7.65	7.88	7.60	7.85	7.80	7.90	7.85	7.95	8.08	7.73	7
SPC. CONDUCTANCE	UMHO/CM		950.00	770.00	940.00	910.00	470.00	490.00	450.00	510.00	550.00	530.00	700.00	500
GRAINS/GALLON, HARDNESS			21.61	17.01	20.75	20.16	10.13	9.87	5.59	11.04	10.18	9.96	14.76	9

CONTACT REPORT

AGENCY/AFFILIATION: State of California-Dept. of Health Services		
DEPARTMENT: Toxic Substances Control Division-Permitting		
ADDRESS/CITY: 245 W. Broadway; Long Beach		
COUNTY/STATE/ZIP: Los Angeles, CA 90802		
CONTACT(S)	**TITLE**	**PHONE**
1. Tayseer Mahmud	waste management engineer	213-590-4868
2.		
E & E PERSON MAKING CONTACT: Sue Swan		**DATE:** 4/11/89
SUBJECT: Status of permit for recycling wastes		
SITE NAME: Holchem (SCC)		**EPA ID#:** CAT000612333

Mr. Mahmud is in charge of permitting SCC facility. He received SCC's revised Operation Plan in Dec. 1988. He conducted an inspection on Feb. 16, 1989 of the facility and found several violations. They were storing wastes over their permitted limits, there were large cracks in the berms surrounding the hazardous waste and the flammable wastes were being stored less than 50 feet from the fenced border of lthe facility (SCC had received a waiver from the Santa Ana Fire Department which allowed them to store the flammable waste less than 50 feet from the fence, but the DOHS has overruled this).

SCC informed DOHS that they are redoing their Operation Plan. They are going to replace the distillation units they have currently; redo the berms around the hazardous wastes & materials and move the flammable wastes from the facility's yard. They told Mr. Mahmud he would receive the new Operation Plan in the next few weeks.

Reference # 16

CONTACT REPORT

AGENCY/AFFILIATION: State of California		
DEPARTMENT: Regional Water Quality Control Board - Santa Ana Region		
ADDRESS/CITY: 6809 Indiana Ave, Suite 200, Riverside		
COUNTY/STATE/ZIP: San Bernerdino, CA 92506		
CONTACT(S)	**TITLE**	**PHONE**
1. Tom Peltier	geologist	(714) 782-4130
2.		
E & E PERSON MAKING CONTACT: Sue Swan		**DATE:** 04/04/89
SUBJECT: SCC investigations		
SITE NAME: SCC		**EPA ID#:** CAT000612333

Mr. Peltier is the project officer for SCC. SCC is redoing water samples of on-site wells and beginning to install off-site wells on properties surrounding SCC. There is no new information in the files at RWQCB since I examined them in March. The second round of water sampling should determine if the contamination has migrated from the perched aquifer to the semi-perched aquifer.

Harding - Lawson Associates is the contractor installing the wells (on-site and off-site). They are cooperating with the RWQCB to determine the vertical and lateral extent of contamination migration.

Reference # 3

CONTACT REPORT

AGENCY/AFFILIATION: Orange County		
DEPARTMENT: Flood Control District		
ADDRESS/CITY: P.O. Box 4048, Santa Ana		
COUNTY/STATE/ZIP: Orange County, CA 92702		
CONTACT(S)	**TITLE**	**PHONE**
1. Dick Runge	EMA-Flood Control	714-834-6192
2.		
E & E PERSON MAKING CONTACT: Sue Swan		**DATE:** 02/15/89
SUBJECT: uses of surface water channels in Orange County		
SITE NAME: OCCC/SCC		**EPA ID#:**

Mr. Runge said any surface water channels located within a three mile radius of OCCC and SCC are used only for Waste disposal and Flood control. There are no surface water intakes in Orange Co.

Reference # 6

CONTACT REPORT

AGENCY/AFFILIATION: Orange County		
DEPARTMENT: Water District		
ADDRESS/CITY: P.O. Box 8300, Fountain Valley		
COUNTY/STATE/ZIP: Orange County, CA 92728-8300		
CONTACT(S)	**TITLE**	**PHONE**
1. Stacy Drinkwine		714-963-8300
2.		
E & E PERSON MAKING CONTACT: Sue Swaen		**DATE:** 03/16/89
SUBJECT: active wells in Orange County		
SITE NAME: OCCC/SCC		**EPA ID#:**

Ms. Drinkwine said she had located at least nineteen active wells within three miles of both sites. Most of them are public wells owned by the City of Santa Ana or Costa Mesa. A few are private irrigation wells. There may be more active wells, but further investigation would be needed to determine this.

Reference # 11

CONTACT REPORT

AGENCY/AFFILIATION: City of Santa Ana		
DEPARTMENT: Fire Department		
ADDRESS/CITY: 1439 S. Broadway, Santa Ana		
COUNTY/STATE/ZIP: Orange County, CA 92707		
CONTACT(S)	**TITLE**	**PHONE**
1. Captain Bob Runnells	Inspector	(714) 647-5700
2.		
E & E PERSON MAKING CONTACT: Sue Swan		**DATE:** 03/17/89
SUBJECT: chemicals stored/inspections of SCC		
SITE NAME: SCC		**EPA ID#:** CAD000612333

Captain Runnells allowed me to examine and copied for me the list of chemicals stored by SCC.

The inspection file on SCC was not available, due to an on-going lawsuit regarding SCC. Captain Runnells did not elaborate on the nature of the lawsuit.

Reference # 8

MEMORANDUM

DATE: April 6, 1989

FROM: Sue Swan, Ecology and Environment, Inc.

SITE: Holchem dba Service Chemical Company
1341 Maywood Ave.
Santa Ana, CA 92705

EPA ID#: CAT000612333

SUBJECT: FIT Site Drive-by

FIT conducted a site drive-by on March 17, 1989 of Holchem dba Service Chemical Company (SCC). The surrounding neighborhood is all industrial; the closest residential neighborhood is almost a mile away. The compound area appears to be completely asphalted. A large gate on the south side was open, but there are signs restricting public access and warning of the presence of dangerous chemicals. The window of the office faces the gate, and someone was at the window checking anyone entering the gate. Was able to see the berm surrounding Containment Area #1. Fencing is visible on the south, west, north and half of the east side; unable to see the fence on the other half of the east fence. The fence on the west has been damaged. There is a pile of "junk" and seemingly abandoned tanks in the northeast corner. No containment was visible for the flammable wastes supposedly stored in this corner.

Reference # 1

DATE 3/17/89

TIME 12:30 A.M. P.M.

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

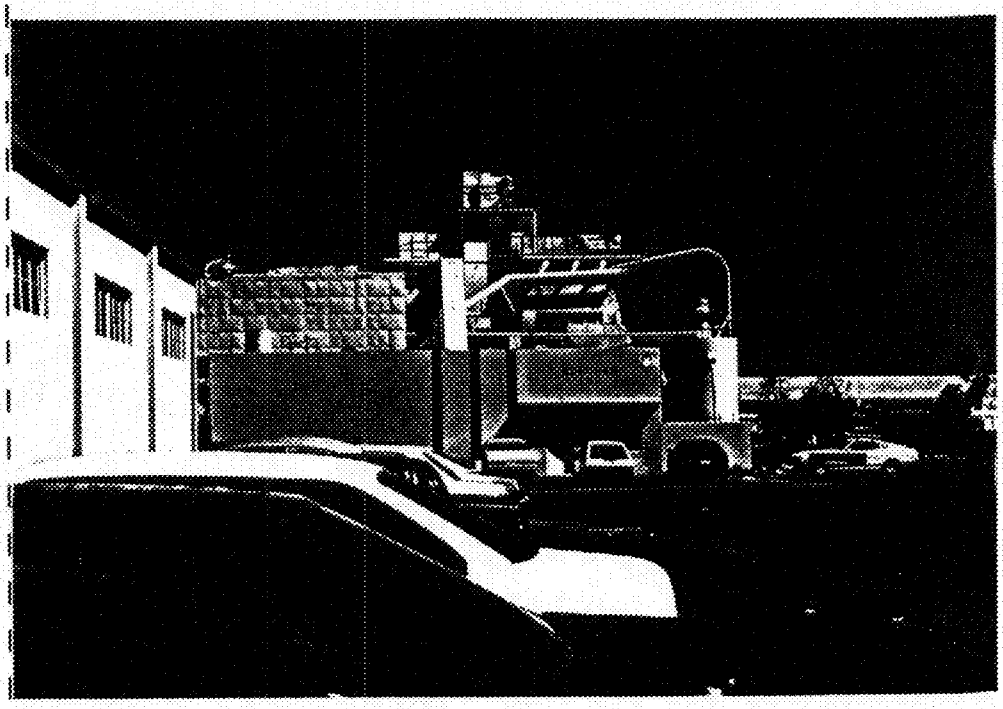
WEATHER clear

SITE Holchem/SCC

TDD# _____

PHOTOGRAPHED BY:
Sue Swan

SAMPLE ID# (if applicable)



DESCRIPTION: Looking east at office and building which houses distillation units.

DATE 3/17/89

TIME 12:30 A.M. P.M.

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

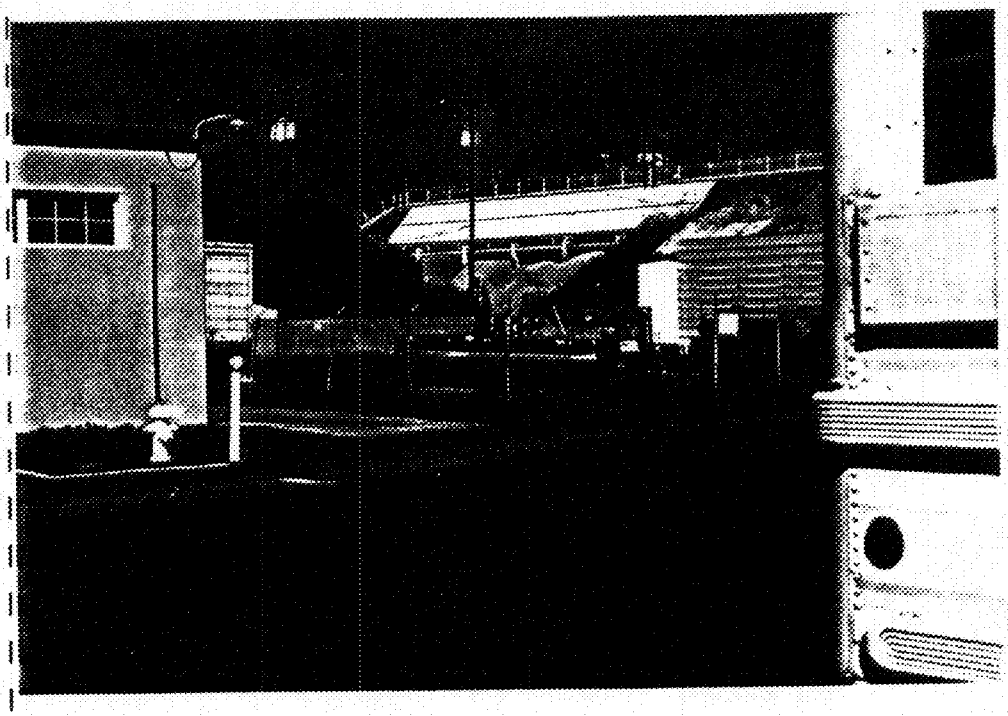
WEATHER Clear

SITE Holchem/SCC

TDD# _____

PHOTOGRAPHED BY:
Sue Swan

SAMPLE ID# (if applicable)



DESCRIPTION: Looking at yard through gate; note berm surrounding barrels on northeast corner.

FIELD PHOTOGRAPHY LOG SHEET

DATE 3/17/89

TIME 12:30 A.M. P.M.

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

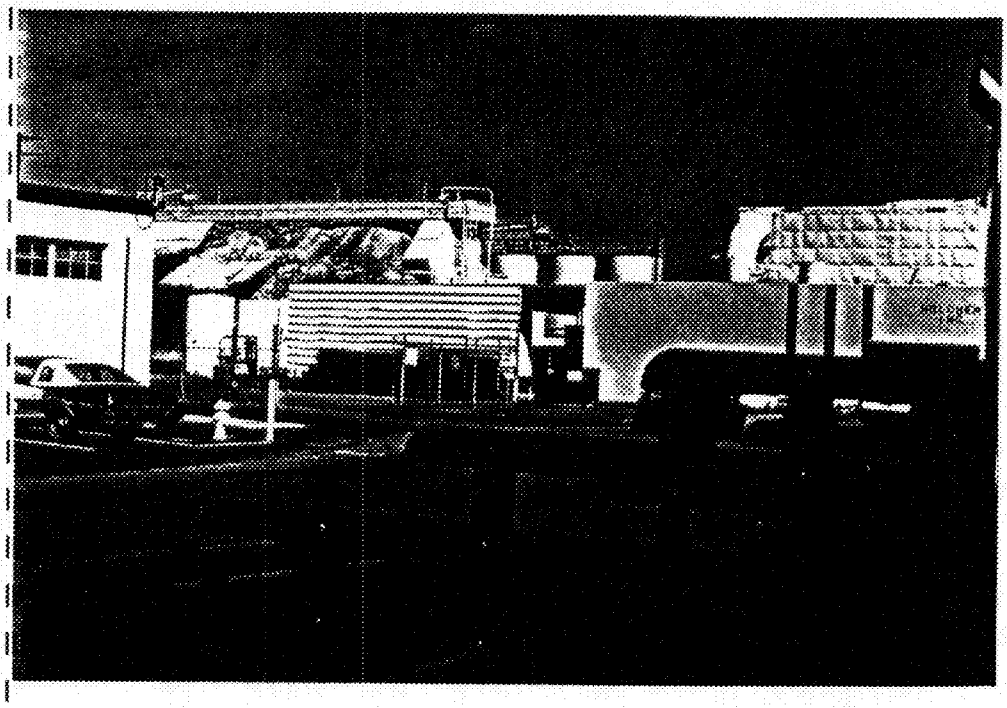
WEATHER clear

SITE Holchem/SCC

TDD#

PHOTOGRAPHED BY:
Sue Swan

SAMPLE ID# (if applicable)



DESCRIPTION: Looking inside distillation bulding and shed with tanks behind it.

DATE 3/17/89

TIME 12:30 A.M. P.M.

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

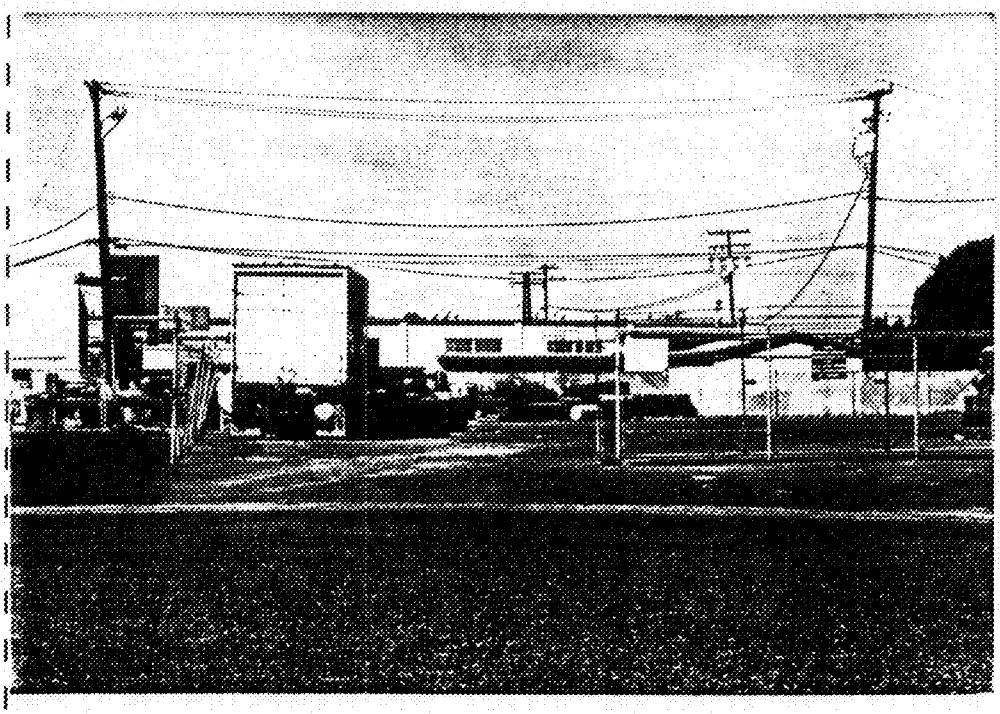
WEATHER clear

SITE Holchem/SCC

TDD#

PHOTOGRAPHED BY:
Sue Swan

SAMPLE ID# (if applicable)



DESCRIPTION: Looking at pile of "junk" in northwest corner. Most of the pile is behind the trailer. Note the fence is damaged, no containment is visible.

DATE 3/17/89

TIME 12:30 A.M. P.M.

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER Clear

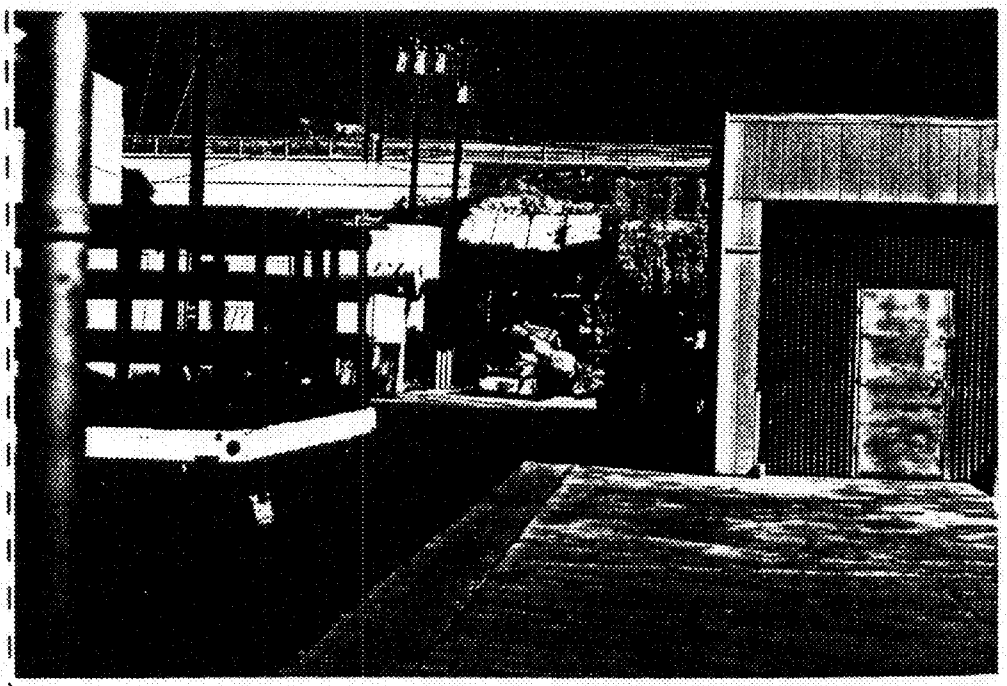
SITE Holchem/SCC

TDD# _____

PHOTOGRAPHED BY:

Sue Swan

SAMPLE ID# (if applicable)



DESCRIPTION: Looking at pile; can see abondoned (?) tanks; cannot see most of the pile.

DATE _____

TIME _____ A.M. P.M.

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER _____

SITE _____

TDD# _____

PHOTOGRAPHED BY:

SAMPLE ID# (if applicable)

DESCRIPTION: _____